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| APPLICATION NO.                             | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/725,175                                  | 11/29/2000  | Robert Richardson    | 41557-187891        | 8591             |
| 26694                                       | 7590        | 08/17/2004           | EXAMINER            |                  |
| VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP |             |                      | SIRCUS, BRIAN       |                  |
| P.O. BOX 34385                              |             |                      |                     |                  |
| WASHINGTON, DC 20043-9998                   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2836                |                  |

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/725,175

Applicant(s)

RICHARDSON, ROBERT

Examiner

Brian Sircus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11, 14-19 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 8, 12, 13, 20 and 26-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 06162004. 6) ☐ Other: \_\_\_\_\_

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. New corrected drawings are required in this application because the boxes in figure 1 need textual titles so one may easily understand the functions of the boxes. Additionally, the figures have blurry lines and need to be resubmitted. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7, 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7, the phrase "mid point of the transmission line" is indefinite with out recitation of where the ends of the transmission line are located.

Claim 9, the phrase "means for transmitting a current from one source along the transmission line to provide power for local low tension on each module" is unclear because the meaning of "local low tension" is not understood.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 14, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Itani (4,535,400). Itani discloses an scr triggering circuit for switching power to a load (circuitry 30, fig 2). There are plural modules 10(a-n). There is a primary transformer loop from R1 to Q1, two secondary windings (nT, xT) per module. The primary and the secondary windings are coupled by the transformers (T1, Tn).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 5, 11, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itani in view of Horna (3,717,808).

Itani discloses a switch driving circuit as stated above but does not disclose the use of coaxial lines. Horna discloses a transformer coupling arrangement that uses coaxial lines to transfer power from an input to an output of the transformer (see abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the driving circuitry of Itani to use coaxial lines because Itani states it is important to have fast rise times for pulses (col. 1, lines 59-60) and Horna

teaches that using coaxial lines reduces capacitance in the transformer which would contribute to faster rise times.

Regarding claim 5, Itani teaches that SCRs may have a voltage rating of 1400 volts and that 5 in series can withstand 6000 volts. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added additional SCRs in order to achieve even higher voltages.

In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies \*\* in the joint, and a plurality of "ribs" \*\* >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.) MPEP 2144.04 VI(B)

Since adding additional SCRs to produce higher voltage drops is well understood by the ordinary artisan this would not be considered an unexpected result.

Regarding claim 11, the grounded shielding conductor is read on the electrostatic shielding around part of the length of the transmission line.

Claims 1, 3, 4, 14, 16, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebersohl et al. (EP 0,592,302) in view of Itani. Ebersohl et al. discloses a switching device that controls a switch (97) for powering a load (connected at X1,Y1). A transformer (T1) with a primary and dual secondary windings with equal numbers of opposite turns (col. 4, l. 44-47, fig 4). Ebersohl et al. does not disclose plural modules.

Itani discloses a device for triggering switches that uses plural switches in series with a module to control each switch. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the switching arrangement of Ebersohl et al. to use plural modules as taught by Itani because Itani teaches that switches have voltage limits and using series switches can switch larger voltages.

Claims 6, 7, 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itani in view of Doss et al. (3,603,887). Itani discloses a switch driving circuit as stated above but does not disclose a transmission line load resistor. Doss et al. discloses a transformer used to transfer pulses and in the main line uses a current limiting resistor (R1). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Itani to use a current limiting resistor because Doss et al. teaches transformers require limiting resistors to protect transformer windings.

Regarding claims 7, 19, the placement of a load resistor would not change the electrical characteristic of the circuit therefore where it is placed is deemed an engineering decision.

Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebersohl et al. in view of Itani and Horna.

Ebersohl et al. discloses a switching device that may be modified to use plural modules as taught by Itani as discussed above but does not disclose coaxial lines for

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the primary of the transformer. Horna discloses a transformer coupling arrangement that uses coaxial lines to transfer power from an input to an output of the transformer (see abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the driving circuitry of Itani to use coaxial lines because Itani states it is important to have fast rise times for pulses (col. 1, lines 59-60) and Horna teaches that using coaxial lines reduces capacitance in the transformer which would contribute to faster rise times.

Regarding claim 25, the grounded shielding conductor is read on the electrostatic shielding around part of the length of the transmission line.

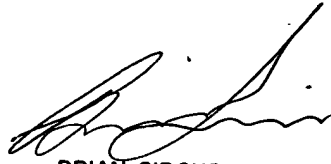
Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebersohl et al. in view of Itani and Doss.

Ebersohl et al. discloses a switching device that may be modified to use plural modules as taught by Itani as discussed above but does not disclose coaxial lines for the primary of the transformer. Doss et al. discloses a transformer used to transfer pulses and in the main line uses a current limiting resistor (R1). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ebersohl to use a current limiting resistor because Doss et al. teaches transformers require limiting resistors to protect transformer windings.

6. Claims 8, 12, 13, 20, 26, 27, 28, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Brian Sircus at telephone number 571 272 2058.

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